To: BRANNAN Kevin[BRANNAN.Kevin@deq.state.or.us]

From: Wu, Jennifer

**Sent:** Wed 4/3/2013 4:40:09 PM

Subject: RE: Big Elk Creek

Okay, talk to you soon.

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us]

Sent: Wednesday, April 03, 2013 9:39 AM

To: Wu, Jennifer

Cc: MICHIE Ryan; FOSTER Eugene P

Subject: RE: Big Elk Creek

Hi Jenny,

If you haven't sent this message to Laura, don't. Ryan and I talked about another project for Big Elk using LiDAR and NHD that would be very useful for modeling and implementation. I will send you a paragraph describing the project by this afternoon.

Cheers,

Kevin

From: Wu, Jennifer [mailto:Wu.Jennifer@epa.gov]

Sent: Wednesday, April 03, 2013 9:35 AM

To: BRANNAN Kevin

Subject: RE: Big Elk Creek

Hi Kevin – I just got this message – it was in my junk email, so sorry for not responding earlier. I'll send this to Laura now.

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deg.state.or.us]

Sent: Monday, April 01, 2013 9:43 AM

To: Wu, Jennifer

Subject: RE: Big Elk Creek

Hi Jenny,

We could add all of the remaining work for the WQ calibration into the TD. Here is how I would modify Task 16 to include the additional work:

Setup, manage, and run the water quality model calibration using source-models, HSPF, and PEST for the Big Elk Creek Bacteria TMDL. The water quality model being used in the Big Elk Creek Bacteria TMDL is a hybrid of standalone source models that feed input to the Watershed model HSPF. When PEST is used to calibrate this hybrid-model, batch files will need to be created to manage the running and linking of the sub-models to HSPF. Template files for the source models that are used by PEST will also need to be created. Also, the source models for wildlife and on-site systems need to be completed and initial values for parameters needs to be determined. Several utility programs from PEST will be needed to process model output for use in the objective functions. The input files for the utility programs will need to be created. Once the template and utility input files are created, the PEST control file for the calibration will need to be created. Finally, the water quality model calibration will be done using PEST. R programming experience is necessary for this work because the sub-models are coded in R.

Let me know what you think.

Cheers,

Kevin

From: Wu, Jennifer [mailto:Wu.Jennifer@epa.gov]

Sent: Monday, April 01, 2013 9:09 AM

To: BRANNAN Kevin Cc: WALTZ David

Subject: RE: Big Elk Creek

Kevin, it looks like the cost of this will be pretty low, \$6K. Is there anything else you might need for Big Elk HSPF modeling? We have about \$45K that needs to be spent.
onresponsive
Thanks - Jenny
From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us] Sent: Monday, April 01, 2013 8:57 AM To: 'Laura Blake' Cc: Carlin, Jayne; Wu, Jennifer Subject: RE: Big Elk Creek
Hi Laura,
I can get you the files by tomorrow morning. I need to add some documentation to code and input files.
Cheers,
Kevin

From: Laura Blake [mailto:Laura.Blake@cadmusgroup.com]

Sent: Friday, March 29, 2013 11:43 AM

2014-919500009063

To: 'carlin.jayne@epa.gov'; 'wu.jennifer@epa.gov'; BRANNAN Kevin Subject: RE: Big Elk Creek
Kevin
One immediate question. When can you send us the model/data files?
Laura
From: Laura Blake Sent: Friday, March 29, 2013 11:23 AM To: 'carlin.jayne@epa.gov'; 'wu.jennifer@epa.gov'; 'BRANNAN Kevin (BRANNAN.Kevin@deq.state.or.us)' Subject: Big Elk Creek
Hi Everyone,
I shared the summary that Kevin provided and discussed with work with Andy (one of my modelers; the one who worked on this originally) and he said this all makes sense to him. He is going to plan out the specifics of how this will get done, and then will let me know if a call is still needed with Kevin (e.g., to discuss any questions we may have). So, I'll keep this group updated on the need or not for our call (currently scheduled for Wednesday).
Laura

## Laura J. Blake | Senior Associate

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